



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,042	03/26/2004	Hiroyuki Ichikawa	KASAP053	8435

22434 7590 08/15/2005

BEYER WEAVER & THOMAS LLP
P.O. BOX 70250
OAKLAND, CA 94612-0250

EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
----------	--------------

3683

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,042

Applicant(s)

ICHIKAWA ET AL.

Examiner

Melody M. Burch

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1-3 are objected to because of the following informalities:
 - In lines 14, 17, and 25 the phrases "such as engine shakes", "such as booming noises", and "such as idling vibrations", respectively, should be deleted to improve the precision and clarity of the claim language.
 - In line 30 of claim 1 the phrase "oscillating rubber plate" should be changed to --oscillating rubber elastic plate-- to maintain consistent claim terminology.
 - In line 30 the phrase "to keep a pressure in the working air chamber at a level of an approximate atmospheric" should be changed back to --make the working air chamber an approximate atmospheric" to maintain language that is consistent with specification descriptions. It is clear from the disclosure that the level of pressure in the working air chamber is made to be approximate atmospheric pressure.

Appropriate correction is required. Claims 2 and 3 are objected to due to its dependency from claim 1.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5992833 to Tanahashi.

Re: claims 1 and 3. Tanahashi shows in figure 1 a fluid filled engine mount 10 for an automotive vehicle comprising: a first mounting member 20 fixable to a power unit side of the vehicle, a second mounting member 14 fixable to a body side of the vehicle, and disposed spaced away from the first mounting member, an elastic body 16 for elastically connecting the first mounting member and the second mounting member, a pressure receiving chamber 42 filled with noncompressible fluid and partially defined by the elastic body so as to excite fluid pressure fluctuation upon input of vibration, an equilibrium chamber 44 filled with the noncompressible fluid and partially defined by a flexible layer 38 so as to permit change in volume, a first orifice passage 58 for connecting the equilibrium chamber to the pressure receiving chamber, and tuned so as to excite resonance of the fluid flowing therethrough between the pressure receiving and the equilibrium chambers in a vibration frequency range of a low frequency large amplitude as disclosed in col. 9 lines 6-10, a partition plate 70 partially defining at a first surface thereof the pressure receiving chamber, and tuned so as to perform absorption of the fluid pressure fluctuation of the pressure receiving chamber in a vibration frequency range, while partially defining at an other surface thereof an oscillating chamber 80 filled with the noncompressible fluid formed on an opposite side from the pressure receiving chamber with the partition plate interposed therebetween, a second orifice passage 88 for connecting the oscillating chamber via element 70 to the pressure receiving chamber and tuned so as to excite resonance of the fluid flowing therethrough

between the oscillating chamber and the pressure receiving chamber in a vibration frequency range of a medium frequency medium amplitude as disclosed in col. 10 lines 28–32, an oscillating rubber elastic plate 64 having an expansion spring and partially defining at a first surface thereof the oscillating chamber while partially defining at an other surface thereof, a working air chamber 90 formed on an opposite side from the oscillating chamber with the oscillating rubber plate interposed therebetween, an air pressure passage 92,96 connected to the working air chamber, and an air pressure control unit 100 for controlling the air pressure exerted to the working air chamber through the air pressure passage so as to exert air pressure fluctuation to the working air chamber with a frequency, and to make the working air chamber an approximate atmospheric pressure during the vehicle running state particularly when control unit 100 is switched to atmospheric pressure as shown in figure 1.

Tanahashi is silent as to the material of the partition plate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the partition plate of Tanahashi to have been rubber since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Tanahashi describes the invention substantially as set forth above including the limitation of the partition plate 70 which partially defines the pressure receiving chamber being suitably tuned to achieve certain damping characteristics as disclosed in col. 12 lines 65-66, but lacks the limitation of the partition plate being tuned specifically so as to

absorb fluid pressure fluctuations in a frequency range of a high-frequency small-amplitude.

Kojima teaches in col. 7 lines 44-50 the limitation of a partition plate 104 which partially defines a pressure receiving chamber being tuned to absorb vibrations in the high-frequency range.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the tuning of the partition plate of Tanahashi, as modified, to have included tuning in the vibration range of high frequency and thus small amplitude in order to provide a mount having means of effectively damping higher frequency vibrations when the vehicle is traveling at elevated speeds.

Tanahashi is silent with regards to the limitation of the oscillating rubber elastic plate which partially defines the working air chamber having an expansion spring specifically being smaller than that of the partition plate which partially defines the pressure receiving chamber.

Kojima teaches in col. 6 lines 30-33 the use of an oscillating elastic plate 68 partially defining a working air chamber 74 having a smaller expansion spring or rigidity than that of a partition rubber plate 104 partially defining a pressure receiving chamber 32.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the expansion springs or rigidities of the oscillating rubber elastic plate and the partition plate of Tanahashi, as modified, to have been arranged such that the expansion spring of the oscillating rubber elastic plate was

Art Unit: 3683

smaller than that of the partition plate, as taught by Kojima, in order to provide a means of enabling the oscillating rubber elastic plate to be more easily affected by changes in air pressure in the working air chamber to achieve varying damping characteristics.

Finally, Tanahashi is silent with regards to the air pressure control unit specifically controlling the air pressure exerted to the working air chamber with a frequency corresponding to an idling vibration during a vehicle idling state.

Kojima teaches in col. 7 lines 1-16 the limitation of controlling the air pressure exerted to the working air chamber with a frequency corresponding to an idling vibration during a vehicle idling state.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air pressure control unit of Tanahashi, as modified, to have controlled the air pressure exerted to the working air chamber with a frequency corresponding to an idling vibration during a vehicle idling state, as taught by Kojima, in order to provide a means of effectively damping lower-frequency idle vibrations.

Re: claim 2. Tanahashi, as modified, teaches in figure 1 of Tanahashi the limitation wherein the second mounting member is formed as a cylindrical body, the first mounting member is disposed spaced away from one or the top of opposite openings of the second mounting member, the first mounting member and second mounting member are connected with the elastic body 16 so as to fluid-tightly close the one or the top of the opposite openings of the second mounting member and to fluid-tightly close an other one or the bottom of the opposite openings of the second mounting member

Art Unit: 3683

with the flexible layer 38, the engine mount further comprising a first partition member 52 and a second partition member 54 mutually superimposed in the axial direction inside the second mounting member and securely supported with the second mounting member so as to form the pressure receiving chamber between the first partition member and the elastic body as shown and to form the equilibrium chamber between the second partition member and the flexible layer as shown, wherein a recess in which element 64 is located provided to a superimposing face side of the second partition member in relation to the first partition member is fluid-tightly closed with the elastic oscillating plate 64 so as to form the working air chamber and to form the oscillating chamber between the elastic oscillating plate and the first partition member as shown and an aperture shown in the bottom portion of element 52 above element 70 provided to the first partition member for partitioning the oscillating chamber and the pressure receiving chamber is fluid-tightly blocked, particularly partially blocked in the areas without holes as broadly recited, with the partition plate.

Response to Arguments

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

Art Unit: 3683

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mms

mmb

August 9, 2005

Melody M. Burch

8/9/05